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**Morphology of *Uvularia*.**—MISS ALDEN<sup>27</sup> has investigated the life history of *Uvularia sessilifolia*, chiefly as to the sequence of events, presumably in the region of New York City. The archesporium of the microsporangium (3-6 cells) becomes differentiated the first of August, at which time also the division into parietal and sporogenous series occurs. Mature microspore mother cells were found in the middle of September, and the tetrad divisions occurred in October, so that the winter is passed with the microspores fully formed. In the latter part of the following April the division of the microspore nucleus into generative and tube nuclei occurs, and probably the former divides after the shedding of pollen. The archesporium of the megasporangium is differentiated early in March (seven months later than the microsporangiate archesporium), and consists of a single hypodermal cell which does not cut off a parietal cell. The reduction division occurs the last week of April.—J. M. C.

**Spermogonium and fertilization in *Collema*.**—MISS BACHMANN<sup>28</sup> has investigated *Collema pulposum* as to the nature of the spermatia and its bearing on the question of functional sexuality among the Ascomycetes. The spermatia of this species are not born in spermogonia, but few in number upon a hypha below the surface of the thallus, being completely imbedded and never set free. The carpogonia resemble those of other lichens in general structure, but the long end cell of the trichogyne does not grow toward the surface of the thallus, but more or less horizontally within the thallus toward the region of the spermatia. The attraction of the spermatia for the trichogynes is shown by the convergence of the latter about a group of spermatia. The spermatium fuses with the trichogyne to which it has become attached, and the subsequent changes are those that have been described. It seems evident that in this case the spermatia and trichogyne are functional.—J. M. C.

**Seedling anatomy of Sympetalae.**—LEE<sup>29</sup> has investigated the seedling anatomy of Convolvulaceae, Polemoniaceae, Hydrophyllaceae, Boraginaceae, Labiatae, Solanaceae, Scrophulariaceae, Bignoniaceae, and Acanthaceae. The extent of the transition region is related in a general way to the size of the seedlings, which varies greatly in different species. In the smaller seedlings the transition region is short, and the rearrangements are concluded in the upper part of the hypocotyl; while in the larger seedlings the transition region is very extended. Cotyledonary tubes occur in members of all the families,

<sup>27</sup> ALDEN, ISABEL, A contribution to the life history of *Uvularia sessilifolia*. Bull. Torr. Bot. Club 39:439-446. pls. 34, 35. 1912.

<sup>28</sup> BACHMANN, FRED A. M., A new type of spermogonium and fertilization in *Collema*. Ann. Botany 26:747-760. pl. 69. 1912.

<sup>29</sup> LEE, E., Observations on the seedling anatomy of certain Sympetalae. I. Tubiflorae. Ann. Botany 26:727-746. pl. 68. 1912.